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TITLE : PRODUCTION OF ETHYLENEDIAMINE-N,N'-DISUCCINIC ACID AND ITS FERRIC COMPLEX

ABSTRACT : PROBLEM TO BE SOLVED: To produce ethylenediamine-N,N'-disuccinic acid that has biodegradability and is useful as a photographic agent, etc., separately, as meso isomer and racemic isomer.

SOLUTION: This production of meso and racemic isomers of ethylenediamine-N,N'-disuccinic acid (hereinafter abbreviated as EDDS) and their ferric complexes respectively isolated condition comprises making the isomer mixture of EDDS react with triiron tetroxide in an aqueous solution of NH_3 or alkali metal hydroxide by taking advantage of difference of the reaction rates of both isomers in condition that the reaction is carried out using triiron tetroxide of approximately the same molarity as that of the racemic isomer of EDDS and NH_3 , etc., of the same molarity as total of both the meso and racemic isomers at pH of 3-7 at 30-80°C to form the ferric complex of the racemic isomer, filtering the aqueous solution in the process of formation of the ferric complex of the racemic isomer, adding triiron tetroxide of approximately the same molarity as that of the meso isomer in the precipitation on the basis of Fe content, and NH_3 , etc., of approximately the same molarity as that of the meso isomer, and making the meso isomer react with the triiron tetroxide at pH at 3-7 at 60-90°C, to form the ferric complex of the meso isomer.

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